Pulpwood agreements and the wood-fibre-processing industry

Introduction

Most of the Crown timber harvested in the province is processed through sawmills that produce lumber (solid-wood products). These plants also produce a large volume of by-products: chips, sawdust, shavings and hogfuel.

In the early 1960s, the 'pulpwood harvesting area agreement' (now called 'pulpwood agreement') was devised to superimpose a pulp industry over the existing sawmilling industry in the province's central interior.

At that time, since there was no market for chips in the interior and there were no debarkers and chippers, the sawmilling industry used only the larger timber. Pulp logs were left on the ground during harvesting operations and the mill byproducts — slabs, sawdust, and shavings — were often burned as waste at the sawmill.

The introduction of the pulpwood agreement aided the establishment of pulpmills, which in turn encouraged the forest industry to harvest and process smaller timber and to introduce debarkers and chippers.

Under a pulpwood agreement, the agreement holder must buy all suitable fibre — typically chips and pulp logs — offered at a reasonable price, before being given the right to harvest timber.

The option to harvest timber is critical to the licence because it provides a guaranteed fibre supply, should the existing timber harvesting and sawmill industry be unable to meet the plant's needs.

Pulpwood agreements led to a significant expansion of the pulp and paper industry in the province's interior and, indirectly, to an expansion of the sawmilling industry. They also led to better use of our timber resource.

Today, pulpwood agreements are also used to encourage the use of previously unused hardwood species, primarily aspen.

As of January 1, 1990, there were nine pulpwood agreements in place and three more were under review. And, because there is currently a surplus of wood by-products and other low-quality timber in some areas of the province, applications have been invited for additional pulpwood agreements.

This fact sheet provides general information on pulpwood agreements.

For more details on pulpwood agreements contact the Timber Harvesting Branch, British Columbia Forest Service, 1450 Government Street, Victoria, B.C. V8W 3E7, or, for information on environment protection, contact the Ministry of Environment, 810 Blanshard Street, Victoria, B.C. V8V 1X5.

Purpose of pulpwood agreements

Pulpwood agreements are issued to stimulate new initiatives in the wood-fibre processing industry.

This results in better use of the timber resource and provides additional social and economic benefits to the province.

In addition, they extend long-term management to areas that have timber that is too small or too decadent for harvest and use by the sawmilling industry.

Designation of pulpwood areas

The Minister may designate an area as a 'pulpwood area' where a resource analysis shows that there is a surplus of wood fibre, either as by-products from the sawmill industry, such as chips and sawlogs, or as timber that is below the sawlog-use standard.

Proposals for pulpwood agreements are invited from within this area.

Province of British Columbia
Ministry of Forests

Pulp and paper industry

B.C.'s pulp and paper industry provides direct jobs for about 20,000 people.

Twenty-five of the more than 140 pulp and paper mills in Canada are located in communities throughout the province: Burnaby, Crofton, Mackenzie, Prince Rupert, Castelgar, Port Mellon, Quesnel, Skookumchuk, Duncan Bay, Kitimat, Prince George, Nanaimo, Port Alberni, Powell River, Annacis Island, New Westminster, Gold River, Port Alice, Squamish, Kamloops and Taylor.

Our province is third, behind Quebec and Ontario, in the value of pulp and paper shipments, accounting for approximately 23 per cent of the national total.

The value of pulp and paper shipments in B.C. in 1988, the year for which the most up-to-date statistics are available, was $5.6 billion.

Pulp and paper products represent approximately 20 per cent of all manufacturing shipments in our province and make up almost 30 per cent of all our province's exports.

Our province's pulp and paper industry is a major player in world markets. Approximately 15 per cent of all world exports of pulp originate from our province. Our province also accounts for about 10 per cent of world newsprint exports.

Pulpwood agreements

Pulpwood agreements are contractual agreements between the Forest Service and a wood-fibre processor that cover fixed geographic areas and require the construction, expansion, or operation of a wood-processing facility. They also require the purchase of wood residues suitable for the mill, typically woodchips and pulp logs from sawmills and other sources.

The pulpwood agreements provide the authority to harvest timber that is below sawlog standards when the volumes of fibre from other sources are insufficient to support the mill.

Advertising requirements

To invite applications from parties interested in constructing, expanding or operating a wood-fibre processing facility, ads are placed — over an eight-week period — in the *B.C. Gazette*, in local and provincial newspapers and on radio.

The ads provide general information on:

- location of the pulpwood area;
- volume of pulpwood available;
- tentative location and date of the public hearing; and,
- where further details may be obtained.

Evaluation

After one or more applications are received, in response to the invitation for tenders, a comprehensive evaluation process is used to decide on whether or not a pulpwood agreement should be awarded. This process is summarized below:

- all affected resource agencies review and comment on the applications;
- the applications are made available to the public at a convenient location for review and comment;
- a preliminary review of the applications is conducted;
- a public hearing is convened to allow any person to comment on or make a submission related to the applications;
- the requirements of other agencies and all public comments — from the public hearing and otherwise — is considered and a final evaluation report with technical recommendations is prepared for the Minister of Forests.

For a more detailed descriptionof this process, contact your local Forest Service office.

Decision-making

Before making a decision on the applications, the Forest Service reviews all relevant information and considers the potential to:

- create and maintain job opportunities and other social benefits in the province;
- provide for the management and use of the province's timber;
- further the province's development objectives;
- meet the government's goals on environmental quality and the management of water, fisheries and wildlife resources; and,
- contribute to provincial revenues.

The Minister of Forests, with the provincial Cabinet's approval, may:

- approve one or more applications;
- decide to grant the pulpwood agreement by competition; or,
- decline to approve all applications.

If one or more applications are approved, the Minister will offer the pulpwood agreement(s), subject to certain appropriate conditions, including other

government agencies' requirements. (For more information on this, see 'Approvals: the Major Project Review Process').

Where one or more pulpwood agreements are to be granted through competition, the Minister, with the Cabinet's approval, may accept the tender with the highest bonus offer, or may decline to approve all tenders.

A pulpwood agreement is issued only after the applicant complies with all of the conditions of award.

Term

Pulpwood agreements have a term of up to 25 years. The existing ones are replaceable while the newer ones are expected to be nonreplaceable.

All agreements are issued subject to the availability of the material being sold under the agreement.

Agreement conditions

The following are standard conditions in all pulpwood agreements:

- *Mill requirement*

  A pulpwood agreement holder is required to construct, expand, or continue to operate a wood-fibre-processing facility.

  This could include pulpmills, oriented-strand board plants, and medium-density fiberboard plants.

  The pulpwood agreement will specify deadline dates for the start of construction and for the mill to become operational.

  Where a new or expanded mill is proposed, the pulpwood agreement holder must maintain a performance bond with the Forest Service until mill requirements have been met.

- *Eligibility to harvest pulp timber*

  A pulpwood agreement holder can only apply to harvest Crown pulp timber under the agreement after proving to the Forest Service that there is insufficient wood residue or pulp timber available from other sources, at reasonable prices, to meet its mill requirements.

  These other sources include:

  - sawmill by-products;
  - residue from sawlog harvesting; and,
  - the purchase of pulp timber from private lands.

- *Maximum volume*

  Each pulpwood agreement will authorize a maximum volume of specified pulp-quality timber that can be harvested each year during the agreement's term.

  Undercuts experienced in any one year cannot be carried over and added to the authorized maximum volume in subsequent years.

  The maximum volume of harvest set out in the agreement may equal the proposed mill requirements or may be less than those requirements.

- *Planning requirements*

  The pulpwood agreement holder must prepare and get approval for the following plans before harvesting is authorized:

  - a strategic plan (management and working plan), updated every five years, for the management of the pulpwood agreement;
  - a development plan, updated annually, showing where, when, and how harvesting and management activities will occur over a five-year period;
  - a plan for reforestation — a 'pre-harvest silvicultural prescription' for each ecological unit where harvesting is proposed; and,
  - a cutting plan for each cutting area.

Importance of the wood-fibre processing industry

B.C.'s wood-fibre processing industry includes:

- 25 pulp and paper mills;
- a wafer-board (panelboard produced by chemically bonding wafers of wood under pressure) plant in Dawson Creek;
- particle-board (panelboard produced by chemically bonding small wood shavings and sawdust under pressure) plants in Vancouver and Grand Forks;
- a hardboard (panelboard produced by using a wet process to chemically bond finely ground wood fibres and pressing them into a dense board) plant in New Westminster; and,
- a parallam (laminated, parallel-strand lumber using peeled Douglas-fir veneer) plant in Vancouver.

Two proposed wood-fibre processing facilities are:

- an oriented-strand-board (panelboard similar to waferboards but where the wafers are chemically bonded in in specific directions to increase the board's strength) plant at 100 Mile House; and,
- a medium-density-fiberboard (panelboard produced by chemically bonding small wood particles and long-wood fibres for a fine-grained board) plant at Williams Lake.

Other government agencies review and comment on each of these plans.

The public is also given the opportunity to review and comment on each of these plans.

- *Reforestation requirements*

The pulpwood agreement holder is responsible for ensuring that harvested areas are reforested to Forest Service's standards, as required under the *Forest Act*.

- *Annual report*

The pulpwood agreement provides for the submission of an annual report to the Forest Service.

- *Fees*

Stumpage is payable when the harvested timber is scaled. A bill is issued by the Forest Service.

Stumpage rates depend on the timber's quality and species, location, terrain conditions, and other factors.

There is an annual rent of $1.25 for each hectare in the area of the timber sale licence — issued under the pulpwood agreement — and a charge is normally levied for the scaling of logs.

The pulpwood agreement holder is normally responsible for all costs incurred in road construction, basic silviculture, timber cruising and sale layout, protection and program administration.

Obtaining cutting authority

The pulpwood agreement holder must apply for timber sale licences in order to harvest standing timber under the pulpwood agreement.

These licences are issued directly to the pulpwood agreement holder without competition providing the applications comply with:

- the management and working plan;
- the development plan;
- the pre-harvest silviculture prescriptions; and
- other Forest Service requirements.

Types of pulp mills

There are two basic methods used in our province to transform wood fibre into pulp:

- mechanical; and,
- chemical.

Each process yields a pulp with characteristics that are most suitable for different products.

Mechanical

In mechanical pulping, wood fibres are separated using grindstones or counter-rotating discs in a refiner. There is little or no lignin extraction, resulting in a much higher yield of pulp than in the chemical process.

Stone groundwood pulp is quite widely used as part of the material to make newsprint, tissue, paper towels, and sanitary products. A mill in New Westminster is a large user of cottonwood in its stone groundwood mill.

Refiner-mechanical pulp has a special appeal as it uses less-expensive chips from sawmills, instead of whole logs. From refiner-mechanical pulp comes thermo-mechanical pulp, which is simply a pre-treatment of chips with steam before refining. It produces longer fibres, hence stronger paper.

B.C. mills now use thermo-mechanical pulp extensively, instead of the older stone-groundwood process, to produce newsprint.

Modern mechanical pulping processes have sought to achieve some of the advantages of chemical pulping with the high yield from mechanical pulping.

One hybrid, in which Canada is taking a leading role, is chemi-thermo-mechanical pulp, which adds a mild chemical treatment before steaming and refining.

There are two modern chemi-thermo mechanical mills — at Quesnel and Taylor — which produce bleached chemi-thermo mechanical pulp for export.

A third chemi-thermo mechanical mill under construction near Chetwynd will make pulp from aspen. It will be the first hardwood, chemi-thermo-mechanical mill in the province.

Chemical

There are two different chemical processes in use in our mills to remove lignin from wood and produce pulp. Lignin is the substance which bonds plant cells together and which forms approximately one half of the woody structure of trees.

The sulphate or kraft process is the dominant chemical pulping method in our province.

The mill at Port Alice on Vancouver Island is the only remaining mill in British Columbia using the sulphite process to produce a pure cellulose, which is used to make rayon, cellophane and fine papers.

The kraft process produces a desirable, stable product with high market demand for a wide variety of paper products. Almost any wood species can be used to produce kraft pulp.

Kraft pulp mills require large capital investments because of the complex recovery boiler system, pollution control requirements, and very large minimum efficient size.

The cost of building a kraft mill in our province today is estimated at more than half a billion dollars.

Protecting our environment

Provincial legislation enacted during 1989 sharply increased penalties for polluters.

Fines have been increased to a maximum of $3 million from $50,000.

Courts now also have the option if imposing jail sentences of up to three years in cases of industrial pollution.

As well, polluters who benefit from their offence face additional fines equal to the amount of the benefit.

Recently, the Ministry of Environment also announced new controls on dioxins discharged from pulp mills in the province. These controls will apply to all chlorinated organic compounds from mills which use chlorine in the bleaching process and will virtually eliminate dioxins from the effluent discharges.

Mills will be required to:

- reduce their discharge of chlorinated organics to a maximum of 2.5 kilograms per air-dry tonne of pulp production by December 31, 1991;
- further reduce the discharge of chlorinated organics to 1.5 kilograms per tonne by December 31, 1994;
- provide secondary effluent treatment by December 31, 1991;
- undertake all immediate measures to reduce discharges of dioxins to the environment, such as eliminating the use by pulp mills of defoamers, which produce dioxins.

These measures to reduce chlorinated organics, especially secondary treatment, will also:

- result in generally lower toxicity;
- help prevent oxygen depletion in water; and,
- assist mills in achieving the ministry's "level A" pollution control objectives for pulp mill effluent.

British Columbia pulp and paper mills

	Company	Location	Estimated Annual Capacity ('000 tonnes) Pulp	Paper
1	Paperboard Industries Corp	Burnaby		165
2	Fletcher Challenge Canada Ltd	Crofton	649	449
3	Fletcher Challenge Canada Ltd	Mackenzie	207	
4	Skeena Cellulose Inc	Prince Rupert	431	
5	Celgar Pulp Co	Castlegar	193	
6	Howe Sound Pulp and Paper Ltd	Port Mellon	230	
7	Cariboo Pulp and Paper Ltd	Quesnel	276	
8	Crestbrook Forest Industries Ltd	Skookumchuk	185	
9	Fletcher Challenge Canada Ltd	Duncan Bay	862	545
10	Eurocan Pulp and Paper Ltd	Kitimat	374	374
11	Finlay Forest Industries Ltd	Mackenzie	138	
12	Canfor Corporaton	Prince George	235	
13	MacMillan Bloedel Ltd	Harmac	370	
14	Macmillan Bloedel Ltd	Port Alberni	435	355
15	MacMillan Bloedel Ltd	Powell River	730	680
16	Island Paper Mills Ltd	Annacis Island		120
17	Northwood Pulp and Timber Ltd	Prince George	502	
18	Canfor Corporation	Prince George	270	100
19	Quesnel River Pulp Co Ltd	Quesnel	300	
20	Scott Paper Ltd	New Westminster	31	117
21	C P Forest Products Ltd	Gold River	280	
22	Western Pulp Ltd	Port Alice	226	
23	Western Pulp Ltd	Squamish	226	
24	Wyerhauser Canada Ltd	Kamloops	426	
25	Fibreco Pulp Inc	Taylor	207	
			7,719	2,905

Approvals for major fibre-processing facilities: The Major Project Review Process

When a proposal for a pulpwood agreement includes the construction or expansion of a major fibre-processing facility, such as a pulp mill, the necessary approvals for this facility must be obtained through a review process that is totally independent from the Forest Service's pulpwood agreement review process.

This process is called the Major Project Review Process and is co-chaired by the Ministry of Environment and the Ministry of Regional and Economic Development.

This process is designed to ensure that:

- the proponent understands the information requirements, procedures, and time-frames for obtaining environmental and other approvals;
- the public receives all the information on the proposal and has the opportunity to comment at every stage; and,
- the project receives a full assessment of the social, economic, and environmental impacts through:
  - co-ordinated participation of concerned agencies at the federal, provincial and local government levels; and,
  - public input.

By bringing together the proponent, the public, and governments, the process aims to integrate projects smoothly into local and provincial development goals.

This co-operation will ensure that:

- environmental and social concerns are addressed; and,
- measures are taken to assist compliance with the agreed-upon standards.

In this way, today's new development projects won't become tomorrow's non-compliance problems.

The Major Project Review Process steering committee is responsible for reviewing the proposals. It is co-chaired by the Ministry of Regional and Economic Development and the Ministry of Environment and includes representatives of the:

- Ministry of Forests;
- Ministry of Energy, Mines and Petroleum Resources;
- Ministry of Municipal Affairs, Recreation and Culture;
- Environment Canada; and,
- Federal Environment Assessment Review Office.

The Major Project Review Process calls for early consultations on project design. This ensures speedy identification of potential environmental and socio-economic impacts and development of effective plans to manage these impacts.

Here's how the process works:

- proponent writes to the co-ordinator, Major Project Review Process, Ministry of Regional and Economic Development, requesting a review;
- proponent meets with the major projects steering committee — comprised of representatives from government agencies —for information about the process, and guidance on the disclosure requirements to complete a proposal prospectus;
- proponent prepares project prospectus, which should include information on:
  - company ownership, officers and directors;
  - current corporate activities;
  - manufacturing processes to be used, including environmental considerations — from the handling of raw materials to the disposal of waste products;
- proponent makes the prospectus public and invites comments;
- public comments submitted to the steering committee and the proponent;
- steering committee reviews the prospectus and the public's comments and makes recommendations:
  - to the provincial Cabinet Committee on Sustainable Development to give approval-in-principle at this stage — this means that all environmental and social impacts have been identified and the proponent is committed to taking effective measures to manage them; or,
  - to continue the review process, because all concerns have not been resolved in the prospectus
- technical, environmental and socio-impact concerns raised during prospectus review are discussed by proponents and the appropriate lead government agency — depending on the particular concerns to be resolved — and reports are prepared;
- reports are made public and comments are invited
- steering committee reviews reports and public's comments and makes recommendations:
  - to the provincial Cabinet Committee on Sustainable Development to give approval-in-principle at this stage; or,
  - to continue the review process, because all concerns have still not been resolved;
- unresolved concerns are again discussed by proponents and the appropriate lead government agency and reports are prepared;
- reports are made public and comments are invited; the provincial Cabinet Committee on Sustainable Development can, at this stage, order further public meetings to resolve any outstanding concerns;
- after all concerns, including environmental impacts, have been resolved, the proponent will be directed to the appropriate government agencies for specific approvals, permits and licences.

Q.P. #84180 FS 1117